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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/603,528	06/25/2003	David P. Quigley	8222-42	4126
7590 02/01/2005			EXAMINER	
Woodard, Emhardt, Moriarty, McNett & Henry LLP			KWON, JOHN	
Bank One Cente	er/Tower	•		
Suite 3700			ART UNIT	PAPER NUMBER
111 Monument Circle			3747	
Indianapolis, IN 46204-5137			DATE MAILED: 02/01/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

••		Application No.	Applicant(s)			
Office Action Summary		10/603,528	QUIGLEY ET AL.			
		Examiner	Art Unit			
		John T. Kwon	3747			
Period	The MAILING DATE of this communication app for Reply	pears on the cov r she t with the c	correspondenc address			
THE - Ex aft - If t - If t - Fa	HORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. Lensions of time may be available under the provisions of 37 CFR 1.1: er SIX (6) MONTHS from the mailing date of this communication, he period for reply specified above is less than thirty (30) days, a reply IO period for reply is specified above, the maximum statutory period value to reply within the set or extended period for reply will, by statute by reply received by the Office later than three months after the mailing med patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be tin y within the statutory minimum of thirty (30) day will apply and will expire SIX (6) MONTHS from , cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).			
Status						
1)⊠	Responsive to communication(s) filed on 11/18	<u>8/04</u> .	<del>-</del>			
2a)⊠	This action is <b>FINAL</b> . 2b) This	action is non-final.				
3)[						
Dispos	tion of Claims					
4)\(\sum \) 5)\(\sum \) 6)\(\sum \) 7)\(\sum \)	Claim(s) 1-4,6-10,12-20 and 22-26 is/are pend 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed.  Claim(s) 1-4, 6-10,12-20 and 22-26 is/are rejected to.  Claim(s) is/are objected to.  Claim(s) are subject to restriction and/o	wn from consideration.				
Applica	tion Papers					
9)[	The specification is objected to by the Examine	ır.				
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.						
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).					
11)[	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.					
Priority	under 35 U.S.C. § 119					
12) <u> </u>	Acknowledgment is made of a claim for foreign    All   b   Some * c   None of:  1.   Certified copies of the priority document:  2.   Certified copies of the priority document:  3.   Copies of the certified copies of the priority document:  application from the International Bureau  See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage			
Attachme	nt(s)					
	ice of References Cited (PTO-892)	4) Interview Summary				
3) 🔲 Info	ice of Draftsperson's Patent Drawing Review (PTO-948) rmation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) rer No(s)/Mail Date	Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate Patent Application (PTO-152)			

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#### **DETAILED ACTION**

### Claim Rejections - 35 USC § 112

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is vague and indefinite what material is claimed.

#### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-10, 12-15, 17-20, 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Griser (US 6 539 910).

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griser (US 6 539 910). A piston of an internal combustion engine has a flared portion between a sharp edge and a substantially rounded lip (18) (See Fig. 4). The difference between the prior art reference and the instant invention is the shape of the sharp edge, i.e., a upstanding wall portion substantially parallel with the longitudinal centerline. It would have been considered to be an obvious choice of mechanical design because one skilled in this art is familiar with basic fluid mechanic and normally has the laboratory test facilities. To optimize or select the suitable shape of the wall would be within the ability of ordinary skilled in this art.

#### Response to Arguments

Applicant's arguments filed November 18, 2004 have been fully considered but they are not persuasive.

#### **Conclusion**

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing

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date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to John T. Kwon whose telephone number is (571) 272-4846. The

examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Henry Yuen can be reached on (571) 272-4856. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Primary Examiner

January 31, 2005